Draft
Environmental Impact Report
for the
San Onofre Nuclear Generating Station (SONGS) Units 2 & 3 Decommissioning Project

State Clearinghouse No. 2016071025
CSLC EIR Number: 784; PRC 6785.1

Lead Agency:
California State Lands Commission
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Sacramento, CA 95825

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MISSION STATEMENT

The California State Lands Commission provides the people of California with effective stewardship of the lands, waterways, and resources entrusted to its care through preservation, restoration, enhancement, responsible economic development, and the promotion of public access.

CEQA DOCUMENT WEBSITE
www.slc.ca.gov/Info/CEQA.html

Project Offshore Geographic Location

	Latitude	Longitude
End of Unit 2 Discharge Conduit	33° 20' 55.8" N	117° 34' 13.5" W
End of Unit 3 Discharge Conduit	33° 21' 11.7" N	117° 33' 51.6" W

Source: California Regional Water Quality Control Board San Diego Region, Order No. R9-2015-0073, NPDES No. CA0109282

Document prepared in coordination with:

Aspen Environmental Group

EXECUTIVE SUMMARY

BACKGROUND, PROJECT LOCATION, AND PROJECT SCOPE

The California State Lands Commission (Commission or CSLC) is the lead agency for preparation of this Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.) because Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and the city of Riverside (collectively, **Applicant**) plan to decommission components of SONGS that are authorized by CSLC Lease No. PRC 6785.1, which hereinafter is referred to as the **CSLC Lease Facilities**. The CSLC Lease Facilities are the: SONGS Units 2 and 3 offshore intake and discharge conduits and associated appurtenances; navigational and environmental monitoring buoys; and riprap along the shore seaward of the ordinary high-water mark.

SONGS is located on the north San Diego County coast, approximately 50 miles north-northwest of the city of San Diego (Figure ES-1). The nearest city, located approximately 2 miles north-northwest of SONGS, is San Clemente in Orange County. The onshore portion of SONGS lies within the boundaries of the Marine Corps Base Camp Pendleton (MCBCP) under real estate agreements between the Participants and the U.S. Government, Department of Navy (DoN). The DoN-owned land where decommissioning-related work would occur includes an approximately 84-acre easement for the primary nuclear facilities (DoN Easement); two leased parcels adjacent to the DoN Easement, including parking lots and laydown/storage land comprising approximately 15 acres; and easements for an access road and rail spur. The Offshore Site, which includes tide and submerged lands in the Pacific Ocean, southwest of the Onshore Site, consists of 21 acres (i.e., the majority of the CSLC Lease Facilities area).

Decommissioning of the CSLC Lease Facilities is part of a larger action by SCE, SDG&E, and the cities of Riverside and Anaheim (collectively, **Participants** [the city of Anaheim is not a party to CSLC Lease No. PRC 6785.1]) to address U.S. Nuclear Regulatory Commission (NRC) and landowner requirements to decommission SONGS, which is hereinafter referred to as the **SONGS Decommissioning Plan**. As proposed by the Participants, the SONGS Decommissioning Plan has the following three components: (1) activities related to a separate, already-approved project allowing for the installation, operation, and maintenance of the Independent Spent Fuel Storage Installation currently located on-site, from 2015 through 2035 (**Approved Independent Spent Fuel Storage Installation [ISFSI] Expansion, Operation, and Maintenance**); (2) activities associated with dismantlement of above-grade structures, meeting NRC requirements for unrestricted use, and disposition of the offshore conduits, from 2019 through 2028 (collectively, the **Proposed Project**); and 3) additional activities projected to begin in approximately 2035 including transfer of stored nuclear fuel (SNF) to off-site storage, additional substructure removal, and final site restoration (**Future Activities**).

Figure ES-1. Site Location

Descriptions of the SONGS Decommissioning Plan components are provided in Table ES-1, below, and Table 2-1 in Section 2.0, *Project Description*).

Table ES-1. Proposed SONGS Decommissioning Plan (Summary)

Decommissioning Plan Components			Dates (anticipated)
1	Independent Spent Fuel Storage Installation Expansion, Operation, and Maintenance **(Approved ISFSI)**	• Conduct ongoing activities limited to the existing ISFSI operation and maintenance (see Section 3.2.1 and *Cumulative Projects* ID No. 1 in Table 3-2).	**2015-2035**
2	Decontamination and Dismantlement (D&D) and Conduit Disposition **(Proposed Project)**	• Conduct majority of the D&D work for the onshore site components, in accordance with NRC requirements • Partially remove intake and discharge conduit components and modify the Unit 2 discharge conduit for future use, if needed • Remove navigational and environmental monitoring buoys and anchors	**2019-2028**
3	Additional Substructure Removal and Final Site Restoration **(Future Activities)**	• Transfer SNF off-site and dismantle ISFSI • Remove additional onshore subsurface material (Units 1, 2, and 3), if required by the U.S. Department of Navy (DoN) • Remove remaining shoreline structures (seawall, walkway, and riprap) • Restore site pursuant to DoN requirements • Remove or abandon Unit 2 discharge conduit • Remove remaining diffuser ports	**~2035 ***

Note: * Subject to identifying an off-site fuel storage location, permitting and execution of these Future Activities could occur sooner or later than 2035

The geographic scope of this EIR covers both onshore and offshore activities that would be performed during the Proposed Project, not only decommissioning activities involving the CSLC Lease Facilities. Many of these activities, particularly those occurring onshore and those related to upland plant decommissioning and radiological decontamination, are beyond the CSLC's jurisdiction. This is because: (1) CSLC's jurisdiction at SONGS is seaward of the ordinary high-water mark; (2) onshore activities at SONGS are on federal (DoN)-owned lands; and (3) NRC has complete oversight and compliance authority over the decommissioning of U.S. nuclear power plants, including radiological aspects of decommissioning. CSLC's approvals related to the Proposed Project are therefore limited. Because the Proposed Project's onshore activities are located on federal land and are under federal jurisdiction, these activities are likely to occur whether or not CSLC approves the Proposed Project, per the NRC operating license for Units 2 and 3.

The scope of this EIR also discloses, but does not analyze, the following Decommissioning Plan activities.

Approved ISFSI (2015 – 2035)

The Approved ISFSI is a single, existing spent fuel storage facility that was constructed in two phases. The ISFSI is located onshore in an upland area on federal property outside of CSLC's jurisdiction, and its operation is under the exclusive authority of the U.S. government. The state's authority over the siting of the ISFSI is limited to land use approvals issued by the California Coastal Commission (CCC). The Approved ISFSI consists of the expansion, operation, and maintenance of (1) the existing above-grade ISFSI approved by the CCC in 2001 (Coastal Development Permit [CDP] No. E-00-014); and (2) the partially below-grade ISFSI expansion that was approved by the CCC in 2015 (CDP No. 9-15-0228) and completed on January 19, 2018. CCC's approval of the expansion is subject to a court settlement that requires SCE to make certain specified efforts to find a new location for the SNF stored in the ISFSI (see below under *Known Areas of Controversy or Unresolved Issues*, and Section 1.2.2.3, Settlement Agreement). The Approved ISFSI is further discussed in Section 3.2.1 and *Cumulative Projects* ID No. 1 in Table 3-2.

Future Activities (~ 2035)

Future Activities consist of SONGS Decommissioning Plan work remaining after completion of the Proposed Project. This EIR's discussion of Future Activities is based on the best available information to date or reasonable assumptions as to the anticipated activities required (see Section 1.5.2, *Uncertainty Regarding Future Decommissioning Plan Activities*, and Section 2.0, *Project Description*). These activities would require future environmental review under CEQA, the National Environmental Policy Act (NEPA), or the California Coastal Act (Pub. Resources Code, § 30000 et seq.).

Facilities that would remain after the Proposed Project are the ISFSI, switchyards and their associated support structures, seawall/walkway/riprap, gunite slope protection, a portion of rail tracks, intake/discharge structure beneath the seawall, SDG&E microwave building, tower, and associated support structures. As part of Future Activities, SONGS Unit 1 SSC remnants below the ISFSI would be addressed after all SNF is moved off-site and the ISFSI is dismantled.

Future Activities would involve final site restoration activities that are contingent on removal of the SNF and would conclude with any activities needed for final NRC license termination. Once all SNF has been packaged and shipped off-site, as part of decommissioning, the ISFSI would be dismantled and the seawall, public beach access walkway, and riprap, which are structurally interrelated, would be dispositioned. Depending on any DoN requirements and jurisdictional agency permit conditions, other activities may be performed. The DoN would determine the required end state for the seawall, public beach access walkway, and portion of the riprap located within the DoN Easement. Therefore, the required disposition of these components is currently unknown.

Within the CSLC lease area, the Applicant proposes to remove exposed riprap above the beach surface (to approximately -2 feet Mean Lower Low Water based on current tidal data) and abandon any remaining riprap in place. In addition, once the Unit 2 discharge conduit is no longer needed for any Future Activities, such as dewatering, remaining diffuser ports and the solid covers would be removed, leaving the mammal exclusion barriers, and the conduit abandoned in place.

If the SNF has not been transferred by 2035, the CCC may determine that the ISFSI needs to be moved. Under that scenario, Future Activities would involve relocation of the ISFSI to a yet to be determined location and packaging and shipping of SNF off-site, assuming a permanent repository or interim storage facility is available. Relocation would likely require reconfiguration of the security features.

PROPOSED PROJECT DESCRIPTION

Most radiological decontamination would occur during Proposed Project implementation (except for activities noted above under Approved ISFSI, and Future Activities related to removing the SONGS Unit 1 remnants below the ISFSI, which include additional substructure removal and final site restoration). The Proposed Project (2019 – 2028) would involve decontamination, dismantlement, and removal of certain above- and below-grade facilities that would be transported to permitted disposal facilities (Table 2-1 lists activities proposed during the Proposed Project). Work would occur in the following areas (see Figure ES-2): Auxiliary Building Area (ABA), East Road Area (ERA), Intake Structure Area (ISA), Make Up Demineralizer Area (MUDA), North Owner Controlled Area (NOCA), North Protected Area Yard (NPAY), South Protected Area Yard (SPAY), South Yard Facilities Area (SYFA), Turbine Building Area (TBA), Unit 2 Area (U2A), Unit 3 Area (U3A), North Industrial Area (NIA), and West Road Area (WRA). Only limited ground-disturbing activities would occur in the Switchyard Area (SYA) and ISFSI portion of the NIA. Decontamination and dismantlement (D&D) activities would be concentrated in areas that were disturbed during SONGS operations, and are covered with asphalt, concrete, or gravel with minimal vegetation. Figure 2-3 depicts the future state of the SONGS site after the Proposed Project is completed. The Participants' objective is to reduce radioactivity on the SONGS site in accordance with NRC regulations for unrestricted use and DoN requirements.

SONGS Units 2 and 3 Offshore Site components proposed for removal include:

- two primary offshore intake structure (POIS) structures – one each for Units 2 and 3 intake conduits
- two auxiliary offshore intake structure (AOIS) structures – one each for Units 2 and 3 intake conduits
- 12 diffuser structures – six each for Units 2 and 3 discharge conduits

- 23 manhole access port structures (MAPS) – 12 for Unit 2 and 11 for Unit 3 intake and discharge conduits
- one fish return conduit (terminal end rising above the seafloor)
- three environmental monitoring buoys and two navigational buoys and their attached water quality instruments and anchors (three buoys are near the seaward end of the Units 2 and 3 intake conduits, with two additional buoys located farther to the south (see Figure 1-2 in Section 1.0, *Introduction*).

The intake and discharge conduits would be abandoned in place; however, the Unit 2 discharge conduit, which may be needed for Future Activities, would not be abandoned until after Future Activities have taken place. As proposed, the Applicant would remove 12 diffuser port structures from the offshore ends of the conduits. The CSLC may require removal of the remaining 114 existing diffuser ports during Future Activities

SUMMARY OF PROJECT OBJECTIVES, PURPOSE AND NEED

To facilitate implementation of the SONGS Decommissioning Plan in a safe, timely, and cost-efficient manner, the Applicant's stated objectives for the Proposed Project are to:

- Reduce radioactivity on the SONGS site in accordance with NRC regulations for unrestricted use.
- Dispose of the offshore facilities in a manner that minimizes navigational hazards, satisfies CSLC requirements, and is least impactful to the environment.
- Commence the Proposed Project in order to promptly complete radiological decontamination of the SONGS site.
- Implement the Proposed Project in a manner that maximizes efficiencies and retains flexibility to respond to future conditions.
- Complete the Proposed Project in a manner that ensures prudent use of ratepayer funds set aside for the SONGS Decommissioning Plan.

The purpose of this EIR is to identify the significant impacts on the environment of the Proposed Project, to identify the alternatives to the Proposed Project, and to indicate the manner in which those significant effects can be mitigated or avoided (Pub. Resources Code, § 21002.1, subd. (a)). This EIR is intended to provide the CSLC with information required to exercise its jurisdictional responsibilities with respect to the lease and the Proposed Project (to be considered at a noticed public hearing). Responsible agencies can use the information in a certified EIR in exercising their jurisdictional or regulatory responsibilities related to the Proposed Project.

Figure ES-2. Major Project Areas

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This EIR assesses the potentially significant impacts of the Proposed Project on the following environmental issue areas:

- Hazardous and Radiological Materials
- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Cultural Resources – Tribal
- Geology, Soils, and Coastal Processes
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Recreation and Public Access
- Transportation and Traffic
- Utilities and Public Service Systems

Impacts within each affected environmental issue area are analyzed in relation to pertinent significance criteria. Impacts are classified as one of five categories.

Significant and Unavoidable	A substantial or potentially substantial adverse change from the environmental baseline that meets or exceeds significance criteria, where either no feasible mitigation can be implemented, or the impact remains significant after implementation of mitigation measures
Less than Significant with Mitigation	A substantial or potentially substantial adverse change from the environmental baseline that can be avoided or reduced to below applicable significance thresholds
Less than Significant	An adverse impact that does not meet or exceed the significance criteria of a particular resource area and, therefore, does not require mitigation
Beneficial	An impact that would result in an improvement to the physical environment relative to baseline conditions
No Impact	A change associated with the Project that would not result in an impact to the physical environment relative to baseline conditions

The Proposed Project would generate significant environmental impacts associated with hazardous and radiological materials, air quality, biological resources, cultural resources, Tribal cultural resources, hydrology and water quality, recreation and public access, and transportation and traffic. With the implementation of Applicant Proposed Measures (APMs) and mitigation measures (MMs) identified in this EIR (see Tables ES-2 and ES-3 and Section 7.0, *Mitigation Monitoring Program*), most impacts would be reduced to Less than Significant. However, several impacts related to air quality and radiological materials would remain Significant and Unavoidable, even after the application of feasible MMs. The CSLC staff or CSLC-contracted monitors will monitor all MMs and APMs during implementation of the Mitigation Monitoring Program.

Table ES-2. List of Applicant Proposed Measures and Recommended Mitigation

Applicant Proposed Measure (APM)		Mitigation Measure (MM)	
APM-1.	Waste Management Program	MM HAZ-4.	Facility Hazardous Waste Permit Extension
APM-2.	Hazardous Materials Business Plan	MM HAZ-5.	Worker Registration/Certification
APM-3.	Vehicle Emission Reductions	MM HAZ-6.	Soil and Groundwater Site Characterization Study and Soil Management Plan
APM-4.	Dust Suppression		
APM-5.	Vehicle Speeds	MM AQ-3a.	Off-Road Equipment Emissions Control
APM-6.	Track-Out to Public Streets	MM AQ-3b.	Marine Vessel Emissions Control
APM-7.	Tarping Trucks	MM BIO-1a.	Worker Environmental Awareness Program
APM-8.	Nesting Bird Deterrents	MM BIO-1b.	Habitat Restoration and Revegetation Plan
APM-9.	Conduit Work Plan	MM BIO-1c	Rare Plant Surveys
APM-10.	Cultural Resources Protection	MM BIO-2a.	Special-Status Reptiles and Amphibians
APM-11.	Appropriate Treatment of Human Remains	MM BIO-2b.	Surveys and Monitoring for Nesting Birds
APM-12.	Stormwater Pollution Prevention Plan (SWPPP)	MM BIO-2c.	Burrowing Owl
APM-13.	Spill Prevention Control and Countermeasure (SPCC) Plan	MM BIO-2d.	Western Snowy Plover/California Least Tern
		MM BIO-2e.	Coastal California Gnatcatcher
APM-14.	Spill Contingency Plan	MM BIO-2f.	Noise Minimization Plan
APM-15.	Dredging Plan	MM BIO-3.	Sensitive Bat Species
APM-16.	Turbidity Monitoring	MM BIO-4.	Potential Onshore Waters of the U.S./State
APM-17.	Offshore Spill Response Plan	MM BIO-9.	Hydrogen Sulfide (H_2S) Gas Control Plan
APM-18.	Notification to Local Mariners	MM BIO-10.	Anchoring Plan
APM-19.	Emergency Services Access	MM BIO-11.	Marine Mammal and Sea Turtle Mitigation and Monitoring Plan
APM-20.	Oversize/Overweight Loads		
APM-21.	Pedestrian and Bicycle Access and Safety	MM BIO-12.	Invasive Non-Native Aquatic Species (NAS)
APM-22.	Private Aids to Navigation	MM CR/TCR-2a.	Archaeological and Tribal Monitoring
		MM CR/TCR-2b.	Unanticipated Cultural/Tribal Resources
		MM CR/TCR-2c.	Cultural Resource Identification during Offshore Geophysical Surveys
		MM CR-4a.	Paleontological Monitoring
		MM CR-4b.	Unanticipated Paleontological Resources
		MM LU-2a.	Deconstruction Liaison
		MM LU-2b.	Advance Notification of Deconstruction
		MM LU-2c.	Quarterly Deconstruction Updates
		MM REC-1a.	Public Notification
		MM REC-1b.	Public Access Plan
		MM WQ-4.	Interim Erosion Control Plan
		MM WQ-5.	Walkway Flood Protection Plan

SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

CEQA requires identification and evaluation in an EIR of a reasonable range of alternatives to a proposed project. Pursuant to State CEQA Guidelines section 15126.6, subdivision (a), an EIR need only consider a range of feasible alternatives that will foster informed decision-making and public participation; therefore, while an EIR need not consider every conceivable alternative, an EIR must include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. The range of potential alternatives that must be and are considered in this EIR is limited to those that would feasibly attain most of the Proposed Project objectives while avoiding or substantially reducing any of the significant effects of the Proposed Project. Alternatives that were considered but rejected are identified and accompanied by brief, fact-based explanations of the reasons for rejection. Among the factors that may have been used to eliminate alternatives from detailed consideration, as permitted by CEQA, are (1) a failure to meet most of the Proposed Project objectives, (2) infeasibility, or (3) inability to avoid significant impacts (State CEQA Guidelines § 15126.6, subd. (c)). Alternatives carried forward for analysis in this EIR are summarized below

- **No Project Alternative**. The Applicant's request for a new CSLC lease would not be approved. Therefore, the lease for the Unit 2 and Unit 3 offshore conduits, environmental monitoring buoys, and riprap along the shore seaward of the ordinary high-water mark would expire in 2023. The Units 2 and 3 offshore conduits, navigational and environmental monitoring buoys, and shoreline riprap (seaward of the ordinary high-water mark) would not be dispositioned and would remain in their current position and configuration. Onshore decommissioning activities would continue per the operating license for Units 2 and 3 granted by the NRC, although some aspects of the Proposed Project activities would be subject to approval by the CCC.

- **Full Removal of Offshore Conduits**. This alternative includes full removal of the SONGS Unit 2 and Unit 3 offshore intake and discharge conduits (inclusive of all vertical structures), fish return, navigational and environmental monitoring buoys and anchors. All other aspects of this alternative would be identical to the Proposed Project.

- **Partial Removal of Offshore Conduits**. This alternative includes full removal of the SONGS Unit 2 and Unit 3 offshore intake and discharge conduits from the seawall to approximately 300 feet off shore, leaving the remaining portions of the horizontal conduit and fish return conduit in place. As with the Proposed Project, all vertical structures (primary offshore intake structure, auxiliary offshore intake structure, and manhole access port structures) associated with the intake conduits would be removed. In addition, all diffuser ports on the discharge conduits would also be removed. All other aspects of this alternative would be identical to the Proposed Project.

- **Full (or Partial) Removal of Onshore Subsurface Structures**. All onshore structures would be removed to depths greater than 3 feet (partial) or completely removed (analyzed as worst-case for impact assessment), as opposed to the Proposed Project, which would leave subsurface structures in place as high as 3 feet below the existing local grade. All other aspects of this alternative would be identical to the Proposed Project.

ALTERNATIVES NOT CONSIDERED FOR FULL EVALUATION

Several alternatives were considered, but were determined to be infeasible, did not clearly offer the potential to reduce significant environmental impacts, or did not achieve most of the Proposed Project objectives. These alternatives were eliminated from further evaluation in the EIR and include the following (refer to Section 5.3 for explanation):

- Crush Conduits in Place
- Local Relocation of the ISFSI in 2035
- Containment Buildings for Interim Storage Facilities for SNF
- Laser Reduction of the Isotopes in SNF
- Retention of Spent Fuel Pools
- Full Removal of Shoreline Structures
- Final End-State Restoration Options
- Future Uses for the SONGS Site
- Accelerated Removal of SNF from SONGS
- Alternate Sites for Disposal of SNF and Other HLW
- In-State Disposal of Non-Radioactive Waste and Recycling

COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

State CEQA Guidelines section 15126.6, subdivision (e)(2), states, in part, that an EIR shall identify an environmentally superior alternative among the other alternatives "if the environmentally superior alternative is the 'No Project' alternative" (emphasis added). Table ES-4 compares the Proposed Project impacts with those of the alternatives. For a more detailed comparison of the Proposed Project and alternatives, see Section 6.5, *Comparison of Proposed Project and Alternatives and Environmentally Superior Alternative*. Based on the analysis contained within this EIR, the CSLC has determined that the No Project Alternative would be environmentally superior as it would avoid impacts on the marine environment that are not avoided by the Proposed Project or the other alternatives. Among the other alternatives, the Proposed Project is the Environmentally Superior Alternative because it would have the smallest impact on the marine environment and would have impacts either less than or identical to the other alternatives related to onshore decommissioning activities.

Of the five alternatives analyzed in the EIR, the Full Removal of Offshore Conduits Alternative has been evaluated at a level of detail equivalent to the Proposed Project, as this alternative represents the current CSLC Lease No. PRC 6785.1 requirements. The other alternatives are evaluated at a lesser level of detail, but with sufficient information to allow meaningful evaluation, analysis, and comparison to the Proposed Project, consistent with CEQA's requirements (State CEQA Guidelines, § 15126.6, subd. (d)).

KNOWN AREAS OF CONTROVERSY OR UNRESOLVED ISSUES

State CEQA Guidelines section 15123, subdivision (b)(2), requires EIRs to contain a brief summary of areas of known controversy including issues raised by agencies and the public. The public has expressed concern about the decommissioning of SONGS due to potential hazards associated with radioactive materials at the facility, particularly the on-site storage of SNF. This is not a new concern as SONGS has been generating HLW in the form of SNF throughout the course of the power plant's operation, which ended in January 2012. Many issues raised by agencies and the public during public scoping for the Proposed Project address ongoing concerns, including:

- **The new ISFSI expansion and SNF storage**. This concern applies to the Approved ISFSI portion of the SONGS Decommissioning Plan. The plan to store SNF at SONGS until 2035 and the lack of an off-site repository for long-term storage of SNF are concerns both for SONGS and for nuclear power facilities across the nation and await resolution by the federal government. As part of a lawsuit settlement (*Citizens Oversight, Inc., et al. v. the California Coastal Commission, Southern California Edison Company, et al.*, Superior Court for County of San Diego), SCE entered into a Settlement Agreement that requires SCE to use "commercially reasonable efforts" to relocate SONGS SNF to an off-site storage facility. Implementation of the Settlement Agreement could result in the transfer of the SNF to a federally or privately-owned consolidated interim storage (CIS) facility prior to the establishment of a federal repository. Until a viable and reasonable location is identified, it is unknown where the SNF will ultimately be stored and what the associated timeline would be for the off-site relocation of SNF. (See Section 1.2.2.3, *Settlement Agreement*, and Appendix D1: Management, Storage, Transportation, and Disposal of Spent Nuclear Fuel and High-Level Waste at San Onofre Nuclear Generating Station.)

- **Storage casks**. This concern also applies to the Approved ISFSI portion of the SONGS Decommissioning Plan. The vendor, Holtec International, revised a storage cask internal component called the basket shim in 2016. The shims help center the basket, which houses used fuel and fosters the flow of helium to transfer heat from the fuel. As of January 2018, SCE has placed four loaded canisters with the newer basket shim in the concrete storage facility at SONGS. In March 2018, SCE discovered a loose piece of a shim (4 inches by ½ inch) while preparing to load a canister. SCE temporarily paused work transferring the used fuel to the dry

storage canisters to evaluate the vendor's fabrication modifications. SCE validated the canisters' integrity for on-site storage safety purposes. SCE asked Holtec and an independent engineering firm to review the original shim basket design to ensure it remains consistent with the NRC requirements, and it was determined that it does. SCE has therefore resumed fuel transfer work, loading the 30 canisters with the original basket shim design. The remaining canisters with the new design are on hold until Holtec completes an internal root cause evaluation.

- **Disposition of the Unit 2 and Unit 3 offshore conduits**. Options range from abandonment in place to full removal. The Applicant proposes to partially remove conduit vertical intake and discharge structures, including 12 diffuser ports. The dispositioning of offshore conduits will be approved by the CSLC as part of its decision on the Proposed Project and by the CCC in its consideration of the CDP for SONGS Decommissioning.

Appendix C, *Index to Public Scoping Comments*, identifies concerns raised during the EIR scoping period, which include the Proposed Project's potential effects to the ocean environment, public access to the coast, biological resources, discharges, local/regional transportation systems, hazardous materials, public services, and air quality.

ORGANIZATION OF THE EIR

The EIR is presented in nine sections as shown below.

- **Section 1.0, Introduction**, provides background on the Proposed Project and the CEQA process.
- **Section 2.0, Project Description**, describes the lease, Proposed Project components and activities, and describes the decommissioning process and schedule.
- **Section 3.0, Cumulative Projects**, identifies the projects that are analyzed for their potential cumulative effects and the EIR's approach to cumulative impact analysis.
- **Section 4.0, Environmental Impact Analysis**, describes existing environmental conditions, Proposed Project-specific impacts, mitigation measures, and residual effects for multiple environmental issue areas, and evaluates cumulative impacts.
- **Section 5.0, Project Alternatives Analysis**, describes the alternatives screening methodology, alternatives rejected from full consideration, alternatives carried forward for analysis, and analyzes impacts of each alternative carried forward.
- **Section 6.0, Other Required CEQA Sections and Environmentally Superior Alternative**, addresses other required CEQA elements, including significant and irreversible environmental and growth-inducing impacts, comparison of the Proposed Project and alternatives, and the environmentally superior alternative.

- **Section 7.0, Mitigation Monitoring Program**, describes the monitoring authority, enforcement responsibility, mitigation compliance responsibility, and general monitoring procedures, and presents the mitigation monitoring table.
- **Section 8.0, Other Commission Considerations**, presents information relevant to the CSLC's consideration of SCE's lease application for the Proposed Project that are in addition to the environmental review required pursuant to CEQA. The considerations include climate change and sea-level rise, commercial fishing, environmental justice, and the CSLC's Significant Lands Inventory.
- **Section 9.0, Report Preparation Sources and References**, lists the persons involved in preparation of the EIR and the reference materials used.

The nine appendices are summarized below.

- **Appendix A** contains an abridged list of major federal and state laws, regulations, and policies potentially applicable to the Proposed Project organized by issue area.
- **Appendix B** contains the Draft EIR distribution list.
- **Appendix C** includes a copy of the NOP and comment letters received in response to the NOP.
- **Appendix D** contains appendices related to radiological hazards. (Appendices D1, D3, D4, and D5 are not directly related to analysis of the Proposed Project. They are background papers provided to maximize disclosure to the public given the highly technical and high-profile nature of nuclear power plant decommissioning.)
    - **Appendix D1, Management, Storage, Transportation, and Disposal of Spent Nuclear Fuel and High-Level Waste at San Onofre Nuclear Generating Station**, provides background information on management, storage, transportation, and disposal of SNF and HLW.
    - **Appendix D2, Radiological Scoping and Characterization Data,** presents results of a radiological scoping survey that provides information on existing onshore and offshore radiological conditions.
    - **Appendix D3, Spent Nuclear Fuel Transportation Experience and Risk Assessments,** provides background information on transportation of SNF, HLW, and radioactive materials generally.
    - **Appendix D4, Nuclear Regulatory Commission Environmental Impact Evaluation,** provides background information on federal environmental review of the decommissioning of nuclear facilities.
    - **Appendix D5, Radiation Basics,** provides background information on basic radiation concepts and human health.
- **Appendix E** includes the spreadsheets used to calculate air pollutant emissions.

- **Appendix F** contains information on special-status species, photos along the offshore conduits, and the effects of sound on marine biological resources.
- **Appendix G** provides a confidential appendix containing California Historical Resources Information Center record search results for cultural resource near SONGS.
- **Appendix H** contains noise modelling outputs for the Proposed Project.
- **Appendix I** contains the SONGS Decommissioning Traffic Impact Study.

Table ES-3. Summary of Impacts and Mitigation: Proposed Project

Impact	Impact Class	Applicant Proposed Measures/ Recommended MMs
SECTION 4.1 HAZARDOUS AND RADIOLOGICAL MATERIALS		
HAZ-1: Release of Hazardous Radioactive Materials during Decommissioning and Disposal	**SU**	APM-1: Waste Management Program APM-4: Dust Suppression APM-12: Stormwater Pollution Prevention Plan (SWPPP) APM-13: Spill Prevention Control and Countermeasure (SPCC) Plan APM-14: Spill Contingency Plan
HAZ-2: Additional Emergency Response Capabilities Required During Decommissioning	**SU**	None recommended
HAZ-3: Exposure to Radioactive Groundwater Contamination	**SU**	None recommended
HAZ-4: Handling of Non-Radiological Hazardous Wastes	**LTSM**	APM-1: Waste Management Program APM-2: Hazardous Materials Business Plan MM HAZ-4: Facility Hazardous Waste Permit Extension
HAZ-5: Risk of Fire, Explosion, or Hazardous Material Release	**LTSM**	APM-1: Waste Management Program APM-12: Stormwater Pollution Prevention Plan (SWPPP) APM-13: Spill Prevention Control and Countermeasure (SPCC) Plan APM-14: Spill Contingency Plan MM HAZ-5: Worker Registration/ Certification
HAZ-6: Mobilization of Existing Contaminants	**LTSM**	MM HAZ-6: Soil and Groundwater Site Characterization Study and Soil Management Plan
SECTION 4.2 AESTHETICS		
AES-1: Affect a Scenic Vista	**B**	None recommended
AES-2: Damage Scenic Resources	**B**	None recommended
AES-3: Degrade Visual Character or Quality of Site and its Surroundings	**B**	None recommended
AES-4: Create Light and Glare	**LTS**	None recommended
SECTION 4.3 AIR QUALITY		
AQ-1: Conflict or Obstruct Implementation of Applicable Air Quality Plans	**LTS**	None recommended
AQ-2: Violation of Air Quality Standards	**LTS**	None recommended

Table ES-3. Summary of Impacts and Mitigation: Proposed Project

Impact	Impact Class	Applicant Proposed Measures/ Recommended MMs
AQ-3: Result in a Cumulatively Considerable Net Increase of Any Criteria Air Pollutant for which the Project Region is in Nonattainment	**SU**	APM-3: Vehicle Emission Reductions MM AQ-3a: Off-Road Equipment Emissions Control MM AQ-3b: Marine Vessel Emissions Control
AQ-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations	**LTS**	APM-3: Vehicle Emission Reductions APM-4: Dust Suppression APM-5: Vehicle Speeds APM-6: Track-Out to Public Streets APM-7: Tarping Trucks MM AQ-3a. Off-Road Equipment Emissions Control MM AQ-3b. Marine Vessel Emissions Control
AQ-5: Create Objectionable Odors	**LTS**	None recommended
SECTION 4.4 BIOLOGICAL RESOURCES		
BIO-1: Contribute to the Loss and Degradation of Sensitive Habitat	**LTSM**	APM-4: Dust Suppression APM-12: Stormwater Pollution Prevention Plan (SWPPP) MM BIO-1a: Worker Environmental Awareness Program MM BIO-1b: Habitat Restoration and Revegetation Plan MM BIO-1c: Rare Plant Surveys
BIO-2: Adversely Affect Terrestrial Special-Status Species	**LTSM**	APM-4: Dust Suppression APM-8: Nesting Bird Deterrents APM-12: Stormwater Pollution Prevention Plan (SWPPP) MM BIO-1a: Worker Environmental Awareness Program MM BIO-1b: Habitat Restoration and Revegetation Plan MM BIO-2a: Special-Status Reptiles and Amphibians. MM BIO-2b: Surveys and Monitoring for Nesting Birds MM BIO-2c: Burrowing Owl MM BIO-2d: Western Snowy Plover/California Least Tern MM BIO-2e: Coastal California Gnatcatcher MM BIO-2f: Noise Minimization Plan
BIO-3: Disturb Non-Listed Roosting or Breeding Bats	**LTSM**	MM BIO-3: Sensitive Bat Species
BIO-4: Modify Potential Onshore U.S./Waters of the State	**LTSM**	MM BIO-4: Potential Waters of the U.S./State
BIO-5: Interfere with Established Native Resident or Migratory Wildlife Corridors	**NI**	None recommended
BIO-6: Conflict with Adopted Conservation Plans	**LTSM**	APM-4: Dust Suppression

Table ES-3. Summary of Impacts and Mitigation: Proposed Project

Impact	Impact Class	Applicant Proposed Measures/ Recommended MMs
		APM-8: Nesting Bird Deterrents APM-12: Stormwater Pollution Prevention Plan (SWPPP) MM BIO-1a: Worker Environmental Awareness Program MM BIO-1b: Habitat Restoration and Revegetation Plan MM BIO-2a: Special-Status Reptiles and Amphibians MM BIO-2b: Surveys and Monitoring for Breeding Birds MM BIO-2c: Burrowing Owl MM BIO-2d: Western Snowy Plover/California Least Tern MM BIO-2e: Coastal California Gnatcatcher MM BIO-2f: Noise Minimization Plan MM BIO-4: Potential Onshore Waters of the U.S./State
BIO-7: Contribute to the Degradation of Marine Habitats	**LTS**	APM-1: Waste Management Program APM-12: Stormwater Pollution Prevention Plan (SWPPP) APM-17: Offshore Spill Response Plan
BIO-8: Risk of Oil Spill Mortality to Protected Marine Species	**LTS**	APM-17: Offshore Spill Response Plan
BIO-9: Release of H_2S Gas from Intake and Discharge Conduits	**LTSM**	MM BIO-9: Hydrogen Sulfide (H_2S) Gas Control Plan
BIO-10: Seabed Disturbance, Dredging, and Debris Accumulation	**LTSM**	APM-9: Conduit Work Plan APM-15: Dredging Plan APM-16: Turbidity Monitoring MM BIO-10: Anchoring Plan
BIO-11: Harassment of Marine Life	**LTSM**	MM BIO-11: Marine Mammal and Sea Turtle Mitigation and Monitoring Plan
BIO-12: Spread of Invasive and Non-Native Marine Species	**LTSM**	MM BIO-12: Invasive Non-Native Aquatic Species (NAS)
SECTION 4.5 CULTURAL AND PALEONTOLOGICAL RESOURCES		
CR-1: Change Significance of Previously Recorded Historical or Unique Archaeological Resources	**NI**	None recommended
CR-2: Change Significance of Previously Unidentified Historical or Unique Archaeological Resources	**LTSM**	APM-10: Cultural Resources Protection MM CR/TCR-2a: Archaeological and Tribal Monitoring MM CR/TCR-2b: Unanticipated Cultural/Tribal Cultural Resources MM CR/TCR-2c: Cultural Resource Identification during Offshore Geophysical Surveys

Table ES-3. Summary of Impacts and Mitigation: Proposed Project

Impact	Impact Class	Applicant Proposed Measures/ Recommended MMs
CR-3: Disturb Unidentified Human Remains	**LTS**	APM-11: Appropriate Treatment of Human Remains
CR-4: Destruction of Unique Paleontological Resources	**LTSM**	MM CR-4a: Paleontological Monitoring MM CR-4b: Unanticipated Paleontological Resources
SECTION 4.6 CULTURAL RESOURCES - TRIBAL		
TCR-1: Change Significance of Previously Recorded Tribal Cultural Resources	**NI**	None recommended
TCR-2: Change Significance of Previously Unidentified Tribal Cultural Resources	**LTSM**	APM-10: Cultural Resources Protection APM-11: Appropriate Treatment of Human Remains MM CR/TCR-2a: Archaeological and Tribal Monitoring MM CR/TCR-2b: Unanticipated Cultural/Tribal Resources MM CR/TCR-2c: Cultural Resource Identification during Offshore Geophysical Surveys
TCR-3: Disturb Unidentified Tribal Human Remains	**LTS**	APM-11: Appropriate Treatment of Human Remains
SECTION 4.7 GEOLOGY, SOILS, AND COASTAL PROCESSES		
GEO/CP-1: Construction Triggered Landslides	**NI**	None recommended
GEO/CP-2: Construction Triggered Erosion	**LTS**	APM-12: Stormwater Pollution Prevention Plan (SWPPP)
GEO/CP-3: Impaired Coastal Sediment Properties	**LTS**	None recommended
GEO/CP-4: Degraded Water Wave, Current, or Circulation Patters	**LTS**	None recommended
GEO-CP-5: Increased Tsunami Threat	**NI**	None recommended
SECTION 4.8 GREENHOUSE GAS EMISSIONS		
GHG-1: GHG Emissions from Project Activities	**LTS**	None recommended
GHG-2: Compliance with GHG Emission Reduction Plans, Policies, or Regulations	**LTS**	None recommended
SECTION 4.9 HYDROLOGY AND WATER QUALITY		
WQ-1 Violation of Water Quality Standards or Waste Discharge Requirements, or Generation of Substantial Additional Sources of Polluted Runoff	**LTS**	APM-1: Waste Management Program APM-2: Hazardous Materials Business Plan APM-12: Stormwater Pollution Prevention Plan (SWPPP) APM-13: Spill Prevention Control and Countermeasure (SPCC) Plan APM-14: Spill Contingency Plan
WQ-2: Groundwater Characterization and Discharge	**LTSM**	MM HAZ-6: Soil and Groundwater Site Characterization Study and Soil Management Plan

Table ES-3. Summary of Impacts and Mitigation: Proposed Project

Impact	Impact Class	Applicant Proposed Measures/ Recommended MMs
WQ-3: Groundwater Depletion or Reduced Recharge	**LTS**	None recommended
WQ-4: Erosion or Siltation due to Altered Drainage Patterns	**LTSM**	APM-12: Stormwater Pollution Prevention Plan (SWPPP) MM WQ-4: Interim Erosion Control Plan
WQ-5: Flooding due to Altered Drainage Patterns or Increased Surface Runoff	**LTSM**	MM WQ-5: Walkway Flood Protection Plan
WQ-6: Increased Ocean Turbidity and Marine Debris	**LTS**	APM-1: Waste Management Program APM-15: Dredging Plan APM-16: Turbidity Monitoring
WQ-7: Degraded Marine Water Quality from Oil and Chemical Spills	**LTS**	APM-17: Offshore Spill Response Plan
SECTION 4.10 LAND USE AND PLANNING		
LU-1: Consistency with Applicable Land Use Plans, Policies, or Regulations	**NI**	None recommended
LU-2: Disrupt, Displace, or Divide Existing or Approved Land Uses	**LTSM**	MM LU-2a: Deconstruction Liaison MM LU-2b: Advance Notification of Deconstruction MM LU-2c: Quarterly Deconstruction Updates
SECTION 4.11 NOISE		
NOI-1: Expose Sensitive Receptors to Onshore Noise Levels in Excess of Standards	**LTS**	None recommended
NOI-2: Expose Sensitive Receptors to Excessive Groundborne Vibration or Groundborne Noise	**LTS**	None recommended
NOI-3: Substantial Temporary or Periodic Increase in Ambient Noise Levels at Sensitive Receptors	**LTS**	None recommended
NOI-4: Create Excessive Underwater Noise	**LTS**	None recommended
SECTION 4.12 RECREATION AND PUBLIC ACCESS		
REC-1: Reduction of Public Access to Recreational Facilities	**LTSM**	APM-18: Notification to Local Mariners MM REC-1a: Public Notification MM REC-1b: Public Access Plan
REC-2: Increased Use of Existing Local and Regional Parks or other Recreational Facilities	**LTS**	None recommended
REC-3: Create Hazards for Recreationists	**LTSM**	APM-18: Notification to Local Mariners MM REC-1a: Public Notification

Table ES-3. Summary of Impacts and Mitigation: Proposed Project

Impact	Impact Class	Applicant Proposed Measures/ Recommended MMs
SECTION 4.13 TRANSPORTATION AND TRAFFIC		
TR-1: Reduce Local Transportation and Circulation	**LTS**	APM-19: Emergency Services Access APM-20: Oversize/Overweight Loads MM REC-1b: Public Access Plan
TR-2: Reduce Pedestrian and Bicycle Rider Safety	**LTSM**	APM-21: Pedestrian and Bicycle Access and Safety MM REC-1a: Public Notification
TR-3: Limit Rail Operations	**LTS**	None recommended
TR-4: Reduce Driveway Safety or Require New Traffic Signals	**LTS**	None recommended
TR-5: Reduce Marine Vessel Safety	**LTS**	APM-9: Conduit Work Plan APM-15: Dredging Plan APM-18: Notification to Local Mariners APM-22: Private Aids to Navigation
SECTION 4.14 UTILITIES AND PUBLIC SERVICE SYSTEMS		
USS-1: New or Altered Public Services or Government Facilities	**LTS**	None recommended
USS-2: Exceed Wastewater Treatment Requirements or Capacity	**LTS**	None recommended
USS-3: Exceed Existing Water Supplies	**LTS**	None recommended
USS-4: Exceed Landfill Capacity	**LTS**	None recommended
USS-5: Conflict with Applicable Solid Waste Statues and Regulations	**NI**	None recommended

Notes: [1] Impacts are classified as according to one of the following five categories:

- SU (Significant and Unavoidable): a substantial or potentially substantial adverse change from the environmental baseline that meets or exceeds significance criteria, where either no feasible mitigation can be implemented or the impact remains significant after implementation of mitigation measures
- LTSM (Less than Significant with Mitigation): a substantial or potentially substantial adverse change from the environmental baseline that can be avoided or reduced to below applicable significance thresholds
- LTS (Less than Significant): an adverse impact that does not meet or exceed the significance criteria of a particular resource area and, therefore, does not require mitigation
- B (Beneficial): an impact that would result an improvement to the physical environment relative to baseline conditions
- NI (No Impact): a Project change that would not result in an impact to the physical environment relative to baseline conditions

Table ES-4. Summary of Impacts: Proposed Project and Alternatives

Impact	Impact Class[1]				
	Proposed Project	No Project	Offshore Conduit Removal		Removal of Onshore Subsurface Structures
			Full	Partial	
SECTION 4.1 HAZARDOUS AND RADIOLOGICAL MATERIALS					
HAZ-1: Release of Hazardous Radioactive Materials During Decommissioning and Disposal	SU	SU	SU	SU	SU
HAZ-2: Additional Emergency Response Capabilities Required During Decommissioning	SU	SU	SU	SU	SU
HAZ-3: Exposure to Radioactive Groundwater Contamination	SU	SU	SU	SU	SU
HAZ-4: Handling of Non-Radiological Hazardous Wastes	LTSM	LTSM	LTSM	LTSM	LTSM
HAZ-5: Risk of Fire, Explosion, or Hazardous Material Release	LTSM	LTSM	LTSM	LTSM	LTSM
HAZ-6: Mobilization of Existing Contaminants	LTSM	LTSM	LTSM	LTSM	LTSM
SECTION 4.2 AESTHETICS					
AES-1: Affect a Scenic Vista	B	B	B	B	B
AES-2: Damage Scenic Resources	B	B	B	B	B
AES-3: Degrade Visual Character or Quality of Site and its Surroundings	B	B	B	B	B
AES-4: Create Light and Glare	LTS	LTS	LTS	LTS	LTS
SECTION 4.3 AIR QUALITY					
AQ-1: Conflict or Obstruct Implementation of Applicable Air Quality Plans	LTS	LTS	LTS	LTS	LTS
AQ-2: Violation of Ambient Air Quality Standards	LTS	LTS	LTS	LTS	LTS
AQ-3: Result in a Cumulatively Considerable Net Increase in Any Criteria Air Pollutant for which the Project Region is in Nonattainment	SU	SU	SU	SU	SU
AQ-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations	LTS	LTS	LTS	LTS	LTS
AQ-5: Create Objectionable Odors Affecting a Substantial Number of People	LTS	LTS	LTS	LTS	LTS
SECTION 4.4 BIOLOGICAL RESOURCES					
BIO-1: Contribute to the Loss and Degradation of Sensitive Habitat	LTSM	LTSM	LTSM	LTSM	LTSM
BIO-2: Adversely Affect Terrestrial Special-Status Species	LTSM	LTSM	LTSM	LTSM	LTSM

Table ES-4. Summary of Impacts: Proposed Project and Alternatives

Impact	Impact Class[1]				
	Proposed Project	No Project	Offshore Conduit Removal		Removal of Onshore Subsurface Structures
			Full	Partial	
BIO-3: Disturb Non-Listed Roosting or Breeding Bats	LTSM	LTSM	LTSM	LTSM	LTSM
BIO-4: Potential Disturbance or Degradation of Onshore Waters of the U.S./State	LTSM	LTS	LTS	LTS	LTS
BIO-5: Interfere with Established Native Resident or Migratory Wildlife Corridors	NI	NI	NI	NI	NI
BIO-6: Conflict with Adopted Conservation Plans	LTSM	LTSM	LTSM	LTSM	LTSM
BIO-7: Contribute to the Degradation of Marine Habitats	LTS	LTS	LTS	LTS	LTS
BIO-8: Risk of Oil Spill Mortality to Protected Marine Species	LTS	NI	LTS	LTS	LTS
BIO-9: Release of Hydrogen Sulfide (H_2S) Gas from Intake and Discharge Conduits	LTSM	NI	LTSM	LTSM	LTSM
BIO-10: Seabed Disturbance, Dredging, and Debris Accumulation	LTSM	NI	SU	SU	LTSM
BIO-11: Harassment of Marine Life	LTSM	NI	LTSM	LTSM	LTSM
BIO-12: Spread of Invasive and Non-Native Marine Species	LTSM	NI	LTSM	LTSM	LTSM
SECTION 4.5 CULTURAL AND PALEONTOLOGICAL RESOURCES					
CR-1: Change Significance of Previously Recorded Historical, Unique Archaeological Resources	NI	NI	NI	NI	NI
CR-2: Change Significance of Previously Unidentified Historical or Unique Archaeological Resources	LTSM	LTSM	LTSM	LTSM	LTSM
CR-3: Disturb Unidentified Human Remains	LTS	LTS	LTS	LTS	LTS
CR-4: Destruction of Unique Paleontological Resources	LTSM	LTSM	LTSM	LTSM	LTSM
SECTION 4.6 CULTURAL RESOURCES - TRIBAL					
TCR-1: Change Significance of Previously Recorded Tribal Cultural Resources	NI	NI	NI	NI	NI
TCR-2: Change Significance of Previously Unidentified Tribal Cultural Resources	LTSM	LTSM	LTSM	LTSM	LTSM
TCR-3: Disturb Unidentified Tribal Human Remains	LTS	LTS	LTS	LTS	LTS
SECTION 4.7 GEOLOGY, SOILS, AND COASTAL PROCESSES					
GEO/CP-1: Construction Triggered Landslides	NI	NI	NI	NI	NI
GEO/CP -2: Construction Triggered Erosion	LTS	LTS	LTS	LTS	LTS
GEO/CP-3: Impaired Coastal Sediment Properties	LTS	NI	NI	LTS	LTS

Table ES-4. Summary of Impacts: Proposed Project and Alternatives

Impact	Impact Class[1]				
	Proposed Project	No Project	Offshore Conduit Removal		Removal of Onshore Subsurface Structures
			Full	Partial	
GEO/CP-4: Degraded Water Wave, Current, or Circulation Patterns	**LTS**	**NI**	**LTS**	**LTS**	**LTS**
GEO/CP-5: Increased Tsunami Threat	**NI**	**NI**	**NI**	**NI**	**NI**
SECTION 4.8 GREENHOUSE GAS EMISSIONS					
GHG-1: GHG Emissions from Project Activities	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
GHG-2: Compliance with GHG Emission Reduction Plans, Policies, or Regulations	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
SECTION 4.9 HYDROLOGY AND WATER QUALITY					
WQ-1: Violation of Water Quality Standards or Waste Discharge Requirements, or Generation of Substantial Additional Sources of Polluted Runoff	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
WQ-2: Groundwater Characterization and Discharge	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**LTSM**
WQ-3: Groundwater Depletion or Reduced Recharge	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
WQ-4: Erosion or Siltation due to Altered Drainage Patters	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**LTSM**
WQ-5: Flooding due to Altered Drainage Patterns or Increased Surface Runoff	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**LTSM**
WQ-6: Increased Ocean Turbidity and Marine Debris	**LTS**	**NI**	**LTS**	**LTS**	**LTS**
WQ-7: Degraded Marine Water Quality from Oil or Chemical Spills	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
SECTION 4.10 LAND USE AND PLANNING					
LU-1: Consistency with Applicable Land Use Plans, Policies, or Regulations	**NI**	**NI**	**NI**	**NI**	**NI**
LU-2: Disrupt, Displace, or Divide Existing or Approved Land Uses	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**LTSM**
SECTION 4.11 NOISE					
NOI-1: Expose Sensitive Receptors to Onshore Noise Levels in Excess of Standards	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
NOI-2: Expose Sensitive Receptors to Excessive Groundborne Vibration or Groundborne Noise	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
NOI-3: Substantial Temporary or Periodic Increase in Ambient Noise Levels at Sensitive Receptors	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
NOI-4: Create Excessive Underwater Noise	**LTS**	**NI**	**LTSM**	**LTSM**	**LTS**

Table ES-4. Summary of Impacts: Proposed Project and Alternatives

Impact	Impact Class[1]				
	Proposed Project	No Project	Offshore Conduit Removal		Removal of Onshore Subsurface Structures
			Full	Partial	
SECTION 4.12 RECREATION AND PUBLIC ACCESS					
REC-1: Reduction of Public Access to Recreational Facilities	**LTSM**	**NI**	**LTSM**	**LTSM**	**LTSM**
REC-2: Increased Use of Existing Local and Regional Parks or Other Recreational Facilities	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
REC-3: Create Hazards for Recreationists	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**LTSM**
SECTION 4.13 TRANSPORTATION AND TRAFFIC					
TR-1: Reduction of Local Transportation and Circulation	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
TR-2: Reduce Pedestrian and Bicycle Rider Safety	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**LTSM**
TR-3: Limit Rail Operations	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
TR-4: Reduce Driveway Safety or Require New Traffic Signals	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
TR-5: Marine Vessel Safety	**LTS**	**NI**	**LTS**	**LTS**	**LTS**
SECTION 4.14 UTILITIES AND PUBLIC SERVICE SYSTEMS					
USS-1: New or Altered Public Services or Government Facilities	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
USS-2: Exceed Wastewater Treatment Requirements or Capacity	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
USS-3: Exceed Existing Water Supply	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
USS-4: Exceed Landfill Capacity	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
USS-5: Conflict with Applicable Solid Waste Statues and Regulations	**NI**	**NI**	**NI**	**NI**	**NI**

Notes: [1] Impacts are classified as according to one of the following five categories:

- SU (Significant and Unavoidable): a substantial or potentially substantial adverse change from the environmental baseline that meets or exceeds significance criteria, where either no feasible mitigation can be implemented or the impact remains significant after implementation of mitigation measures
- LTSM (Less than Significant with Mitigation): a substantial or potentially substantial adverse change from the environmental baseline that can be avoided or reduced to below applicable significance thresholds
- LTS (Less than Significant): an adverse impact that does not meet or exceed the significance criteria of a particular resource area and, therefore, does not require mitigation
- B (Beneficial): an impact that would result an improvement to the physical environment relative to baseline conditions
- NI (No Impact): a Project change that would not result in an impact to the physical environment relative to baseline conditions

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